

GREAT NECK UFSD NORTH HIGH SCHOOL & NORTH MIDDLE SCHOOL TRAFFIC STUDY

Great Neck, New York

Board of Education Meeting
October 18, 2018

TRAFFIC EVALUATION OF A **NEW** PARKING FACILITY FOR GREAT NECK NORTH HIGH SCHOOL



QUALIFICATIONS

Nelson & Pope

- Multi-disciplined civil engineering, architecture and surveying partnership located in Melville
 - Established in 1954
 - Over 80 technical and support staff
 - Dedicated Staff of Transportation Engineers and Technicians who primarily work on municipal roadway and traffic projects
 - Diversified expertise and direct knowledge of the Long Island infrastructure network
- EXPERTISE includes but not limited to:**
- Traffic safety evaluation, impact studies and warrant analysis
 - Intersection, roadway and corridor traffic studies, mitigation and improvements
 - Traffic calming studies and design

Nelson & Pope continued

Prior experience with SCHOOLS:

- Great Neck North High School, Traffic Study & Conceptual Design for Safety Improvements
- Levittown Schools Traffic Study
- Backheath Road Long Beach High School Traffic Study
- Anstice Street Traffic Impact Study
- Hempstead School District Traffic Impact Study
- East Hampton School District Traffic Impact Study
- Hewlett Woodmere Middle School Reconstruction of 145,000 SF Middle School Site Engineering, Traffic Engineering, DEIS
- Charles Champagne Elementary School Traffic Engineering Signal Design at School Driveway
- Islip High School Traffic Signal Design Service, Existing County Road & High School Intersection Improvements

Nelson & Pope continued

Prior experience with SCHOOLS continued:

In addition to performing transportation studies for local school districts, N&P has also provided site work and surveying services for multiple schools:

- MacArthur Public Schools
- St. Patrick's School, Islip
- Oxhead Road Elementary School
- Hawkins Path Elementary School
- Centereach High School/Dawnwood Middle School
- Selden Middle School/Newfield High School
- Jericho Elementary School
- Smithtown High School East
- The Knox School
- Lake Grove School
- Smithtown Central School District
- Lake Grove School
- Bethpage High School
- Valley Stream Central School District

STAFF QUALIFICATIONS

Joseph G. Pecora, PE, PTOE

- Licensed Professional Engineer: New York, 1979 & Florida, 1985
- Registered Traffic Engineer: California, 1985
- Certified Professional Traffic Operations Engineer, 2000
- Member of National Committee on Uniform Traffic Control Devices (MUTCD)
(holds one of 37 seats nationwide since 1992)
 - ✓ Assisted in the writing of the 2000, 2003 and 2009 editions of the Manual on Uniform Traffic Control Devices and presently writing the next edition.

Pecora continued

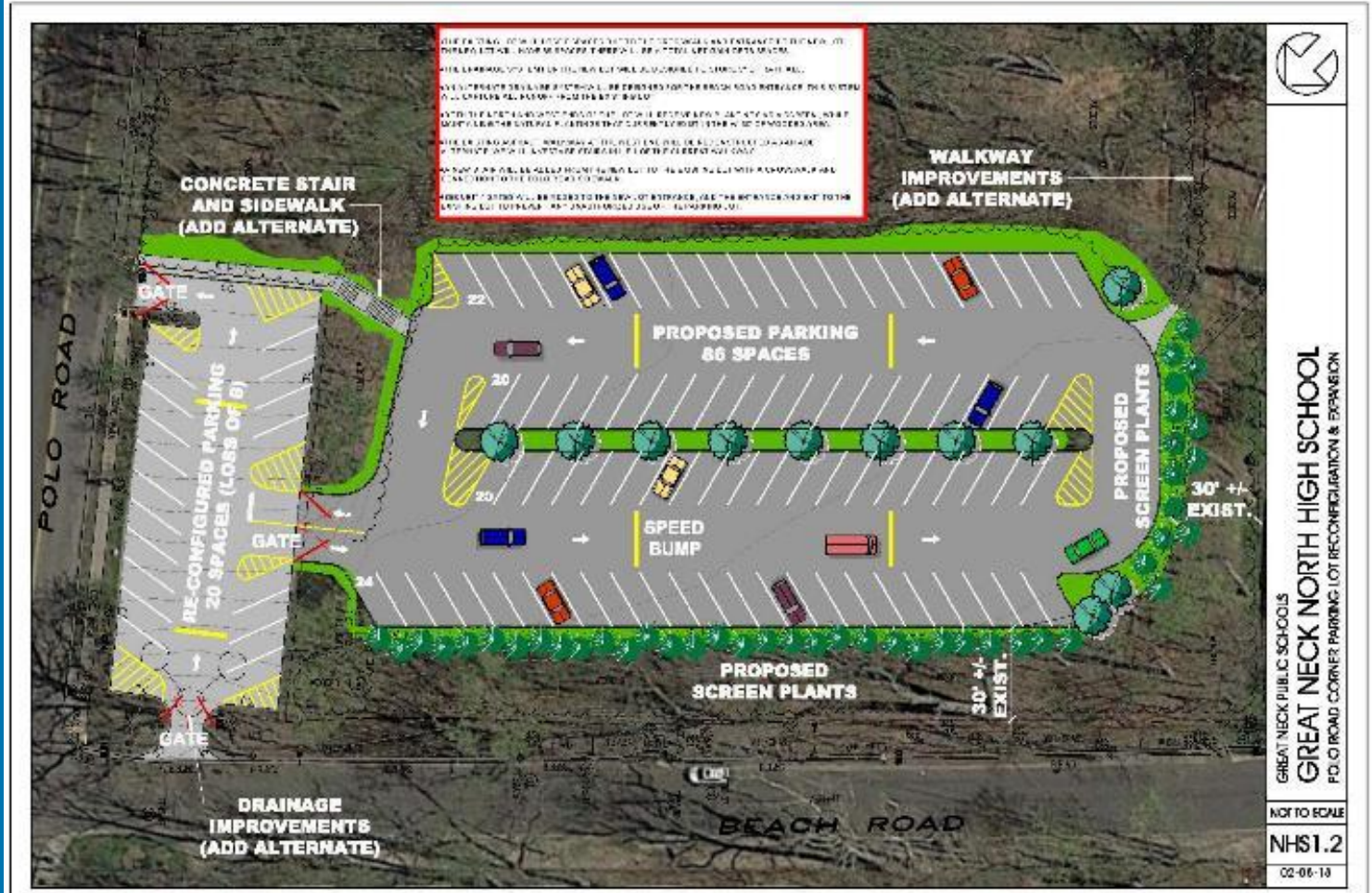
- 46 plus years of experience in transportation engineering, planning and operations for both public and private sectors
- Served as prior Nassau County Director of Traffic Engineering
- Served as prior Commissioner of Nassau County Department of Public Works

Osman Barrie, PE, PTP, PTOE

- Licensed Professional Engineer: New York, 2006 & New Jersey, 2005
- Professional Transportation Planner, 2009
- Certified Professional Traffic Operations Engineer, 2007
- 17 years experience in traffic engineering, transportation planning, transit planning and civil engineering for both private and public/municipal projects
- Manages and performs traffic and transportation planning studies including traffic impact and assessment studies, accident analyses, traffic signal warrant analyses, parking assessment studies, concept designs and internal roadway design/analyses as well as conducted traffic reviews for diverse developments

STUDY OBJECTIVE

How could the new parking lot impact traffic flow and pedestrian safety ??



Study Objective continued

- Great Neck School District desires to construct a new parking facility for the North High School
- Determine the impact on local traffic (pedestrian and vehicular) created by the new parking facility
- As part of this review, evaluate the pick up and drop off of students at both the North High School and the North Middle School

STUDY METHODOLOGY

In executing the scope of work the following steps were taken

1

Field Inspection

Conducted field observations on May 24th, 2018 when schools were in session

2

Turning Movement Counts

Collected traffic and pedestrian volumes at study intersections
May 24th, 2018
7:30-9:30 AM
2-4 PM

3

Accident Data

Obtained and analyzed the most recent 3 years of accident data for Polo Road and Arrandale Avenue

4

Analysis of Traffic and Accident Data

Reviewed and analyzed all collected data

5

Proposed Parking Layout

Reviewed the proposed parking plan with respect to circulation, ingress and egress and its future interaction with the existing on-site and off-site parking facilities and pedestrian movements

Study Intersections

1. Polo Road at Nirvana Ave and Brokaw Lane
2. Polo Road at North High School access
3. Polo Road at North High School parking lot exit
4. Polo Road at Beach Road
5. Polo Road at Arrandale Avenue
6. Arrandale Avenue at North Middle School access



COMPARISON

Turning Movement Counts & School Attendance

Date of Count	School: North High	School: North Middle
05/24/2018	94.82%	97.27%

vs. Random Day Attendance

Date of Count	School: North High	School: North Middle
10/16/2017	96.6%	97.57%



SAFETY

ACCIDENT HISTORY

The most recent 3 years of accident data was obtained from New York State Department of Transportation (NYSDOT) for intersections and roadway segments adjacent the schools

SAFETY

Accidents in study area over 3 Years

**Total of 10
accidents**

A total of 10 accidents occurred in the study area (on average 3 accidents per year). The accidents are minimal and not unusual given the number of vehicles involved in the pick up and drop off of students during a short period of time

100%
**Property
Damage**

100% of the accidents resulted in vehicular damage

ZERO
Fatal Accidents

No accidents resulted in a fatality

ZERO
**Pedestrian
Related Accidents**

No accidents related to the pedestrians

FINDINGS

- The busy drop off time period lasted approximately 20 minutes (7:40-8AM)
- The busy pick-up time period lasted approximately 30 minutes (2:30 -3PM)
- Outside of these busy time periods, no traffic flow and congestion issues were observed on the roadways in the vicinity of the schools
- Parents picked up and dropped off the students on both sides of Polo Road
- Markings at the circle are worn out and need to be refurbished (*completed by the Village of Great Neck DPW in July 2018*)
- School buses parked on Polo Road waiting to access the High School pick up area at times impeded the sight line for exiting vehicles

Findings continued

- Field observations, supported by accident data indicates that the arrival and dismissal patterns function well
- The proposed parking lot expansion will improve traffic operation and safety
- The new parking facility will allow for greater flexibility to minimize conflicts between vehicles exiting the parking lot with school buses at dismissal time
- The proposed parking lot will help reduce on-street parking on Beach Road and hence improve pedestrian safety
- The proposed parking lot will not create any operational or safety issues with the present drop-off and pick-up procedures at the North High School

RECOMMENDATIONS

- Since the new lot is going to provide egress onto Polo Road, we would recommend that the parking (buses) be prohibited from parking on Polo Road from the egress of this lot north to Beach Road.
- The crosswalk at the school access on Arrandale Avenue is impeded by landscaping (walk) for any pedestrians that exit the school and head west on Arrandale Avenue.
- The pedestrian access within the parking lot is designed to allow access to the parking field. However, this access will be blocked if anyone utilizes the handicap parking spaces that are provided. This issue should be addressed.

CONCLUSIONS

- The proposed parking lot will improve traffic flow and pedestrian safety.
- The proposed parking lot will not create any operational or safety issues with the present pick-up and drop-off procedures at the North High School.

GREAT NECK UFSD

North High School and North Middle School Traffic Study

Thank You